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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,265	10/07/2008	Pierre Richaud	RICHAUD1	6451
1444 7590 12/13/2011 Browdy and Neimark, PLLC 1625 K Street, N.W. Suite 1100 Washington, DC 20006			EXAMINER IBRAHIM, MEDINA AHMED	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 12/13/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/593,265

Applicant(s)

RICHAUD ET AL.

Examiner

MEDINA A. IBRAHIM

Art Unit

1638

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 28 November 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☒ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: 2 and 36

Claim(s) rejected: 1, 4-35 and 37-39

Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

13. ☐ Other: _____.

/MEDINA A IBRAHIM/
Primary Examiner, Art Unit 1638

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments against the 103 rejection are duplicatives of what have been previously addressed. Applicant argues that the claimed invention is not obvious over the cited prior arts because Applicant asserts that the claimed transgenic plant expressing two different sequences encoding two different eukaryotic P1b-type ATPase of the Zn, Co, Cd or Pb subclass is able to accumulate and translocate Zn, Co, Cd or Pb to the shoot and enzyme of eukaryotic origin and not a prokaryotic origin. Applicant argues that transgenic plants expressing ZntA disclosed by Borremans exhibit tolerance to heavy metal but not accumulation or translocation of heavy metals, therefore, cannot be used for phytoremediation. These are not found persuasive because the WO 02/081707 clearly states that transgenic plants expressing ZntA can be used for phytoremediation and for a safe crop that has resistance to heavy metals and low heavy metal content (see at least the abstract). According to WO 02/081707, at page 2, phytoremediation technology is not limited to metal accumulation and translocation but also includes stabilization of heavy metals in soil (phytostabilization). As stated in the Office action, Borremans et al teach transformed plants expressing at least one heterogenous P-type ATPase of eukaryotic origin, wherein the transformed plant/plant cells show improved heavy metal tolerance and improved heavy metal accumulation. Borremans et al also provides the motivation to use P1b-type ATPase proteins encoding genes as the P-type ATPase genes provide tolerance to multiple toxic trace elements such as Cu, Cd, Pb, Zn and Ag.

Bernard et al teach transgenic tobacco plants expressing eukaryotic P-type ATPase gene which confers heavy metal accumulating activity and the use of said transgenic plants for phytoremediation genes such as phytochelatin synthase which can be used for metal sequestering. Therefore, given that the prior art teaches transgenic plants expressing P-type ATPase genes of eukaryotic origin and use of said plant for phytoremediation of heavy metals, one of ordinary skill in the art would be able to use two or more known P1b-type ATPase of eukaryotic origin for the production of transgenic plants, given that P-type ATPase genes provide tolerance to multiple toxic trace elements such as Cu, Cd, Pb, Zn and Ag as taught by Borremans et al.